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ABSTRACT

This paper presents findings of a study that developed, measured, and tested the Organizational/Supervisory (O/S) Model of Instructional Supervision. The six dimensions of the Organizational Supervisory Climate Inventory (OSCI)--organizational structure, professional autonomy, collaborative sharing, district supervisory climate, reflection, and centralization--served as independent variables. The dependent variables were three recognized indices of effectiveness--school effectiveness, organizational effectiveness, and school holding power. Methodology involved a survey of 7,358 professional staff (primarily teachers) and 452 administrators in 1 state and interviews with 2 randomly selected teachers and the principal in 20 of the schools that participated in the survey. Findings indicate that the OSCI instrument is a highly reliable and stable measure of the organizational/supervisory climate, which indicates that the relationship between school effectiveness and school climate can be conceptualized and measured multidimensionally. The O/S model shows the usefulness of subscribing to a richer view of school instructional supervision as a fundamentally organizational phenomenon. Appendices include information on the research-design process, the O/S Model of Instructional Supervision, and statistical data. Contains 29 references. (LMI)

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Developing, Measuring and Testing an Organizational Model of Instructional Supervision: Implications for Administrative Leadership

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Introduction

Within the past two decades, a number of factors have contributed to a heightened focus on the quality and effectiveness of instructional supervision in schools. The effective schools movement has produced numerous studies directing attention to the quality of teaching and learning in schools and particularly to the nature of instructional supervisory roles assumed by school administrators (Bossert, 1988; Clark, Lotto, & Astuto, 1984; Pitner, 1988). In the public sector, widespread concern has become increasingly evident regarding the quality of teachers' classroom performance. Fueled by these concerns, legislative reform initiatives targeting teacher professional accountability have proliferated at the state level. Various models of teaching and instructional supervision have been developed in recent years in response to the demand for higher student achievement. These and other factors have brought increased awareness among researchers and practitioners of the wide variety of person variables and socio-psychological factors influencing classroom teaching and learning and the multiple dimensions associated with school instructional practices. These multiple dimensions, in turn, have been found to influence school climate and impact school effectiveness. Indeed, these important issues have made the inherent complexity and multidimensional nature of school organizations increasingly apparent to educational researchers (Willower, 1988).

Although the multidimensional nature of school life has become a recent research interest, the traditional literature in educational administration and supervision has not satisfactorily addressed this complexity. For example, within the instructional supervision literature, supervisory practices in schools have traditionally been framed via a micro-event perspective. That is, supervisory role behavior and decision making in schools have been viewed primarily as isolated micro-events, consisting of individual and discrete supervisory actions involving teachers with principal supervisors and/or peer coaches. However, administrators and teachers in schools typically engage in a wide variety of micro- and macro-supervisory activities arising from organizational structures and dynamics

commonly found in schools. Involvement in these supervisory activities contributes to educators' perceptions of school supervisory climate which, in turn, affects school instructional outcomes. Research reviewers, though, have noted that empirical studies of school effects have been hindered by a lack of definitional clarity in both the school climate and school effectiveness constructs (Anderson, 1982; Hoy & Ferguson, 1985; Hoy, Tarter & Kottkamp, 1991). In view of these problems and in an effort to clarify the nature of school organizations, researchers in educational administration have recently begun to call attention to the multidimensional nature of school organizational culture, and the usefulness of investigating individual subcultures found in schools (Firestone & Corbett, 1988; Willower, 1986). Furthermore, Allison (1983), noting the limited usefulness of borrowing traditional models of organization from the social sciences and applying them to schools, suggests that schools are unique organizations requiring their own explanatory models.

In response to the above conditions and in contrast to more generalized approaches to viewing instructional supervisory behavior in schools presently in the literature, this study investigates one important dimension of school organizational culture - the school supervisory subculture - and explores the nature and effects of the adult professional learning environment and supervisory climate that support it. The study addresses a perceived need for the development and testing of an organizational model and measurement system that considers the supervisory behaviors and professional learning activities of administrators, teachers and peer professionals as comprising an important supervisory subculture within schools. Thus, this study was formulated to explore instructional supervision in schools as an organizational phenomenon. This organizational perspective on instructional supervision is developed in contrast to more traditional views of instructional supervision present in the literature focusing on the individual and clinical nature of supervisory interactions among administrators and teachers. This study emerged in direct response to a perceived

lack of definitional clarity in the organizational effectiveness and school climate constructs as presented in the school effectiveness, school organization and supervision literatures. The research reported is part of a larger quantitative and qualitative investigation of the relationship between the organizational/supervisory subculture of schools and a number of indices of school effectiveness (Claudet, 1993).

Purpose

This paper discusses model and instrument development efforts completed in the study, and reports results of initial testing conducted to explore the reliability and construct and criterion-related validity of the organizational/supervisory measure developed. Additionally, the paper presents overall results of a complementary qualitative analysis phase of the study. The following section provides a discussion of the structure of the combined quantitative/qualitative research design employed to frame the study.

Research Design

This study employed both conceptual model building and empirical field testing as components of an integrated, multistage/multilevel design approach to the process of knowledge construction in educational administration research. In particular, the study's unique design utilized a two-stage/two-level process that involved the use of both quantitative (i.e., factor analyses, criterion-related validity and reliability) and qualitative (inductive analysis) methods (stages), and multiple (i.e., schools and teachers) units of analysis (levels) within each stage (Appendix A). Together, the quantitative and qualitative multilevel stages of the study served as important complementary facets of a comprehensive and integrated theory-building/research methodology design. Importantly, this complementary theory-building/multiple methodology research approach significantly extends the current quantitative/qualitative complementarity debate (Howe, 1988; Howe & Eisenhart, 1990), and provides an important new dimension (viz., model building/research methodology integration) to

considerations of theoretical and empirical adequacy in educational administration research (Willower, 1963, 1988).

Specifically, the study's integrated research design incorporated features of inductive organizational model building in combination with deductive empirical field testing. Model building and refinement efforts were significantly enhanced through the combined use of both quantitative and qualitative methodologies. The primary focus of the study design was in developing and testing an organizational model that considers the supervisory behaviors and professional learning activities of teachers, peer professionals and administrators as comprising an important adult supervisory subculture within schools. A model of the school supervisory subculture was constructed and empirically tested in schools through the development and piloting of a survey measure of school organizational/supervisory (O/S) climate. Teacher and administrator perceptions of O/S climate were conceptualized as important indicators of the quality of a school's supervisory subculture (or, adult learning environment). Educators' perceptions of the nature and quality of existing school professional learning environments were operationalized through school profile scores on a number of professional learning climate dimensions, including: organizational structure, professional autonomy, collaborative sharing/rapport, district supervisory climate, self reflection, and centralization.

The study consisted of two major parts. Part One (Organizational Model Development) constituted the study's conceptual phase, and involved the initial construction and refinement of an organizational model of instructional supervision (the Organizational/Supervisory (O/S) Model of Instructional Supervision, Appendix B). The O/S model developed in Part One presented a framework for synthesizing relevant perspectives from organization theory, instructional supervision and school climate and effectiveness research. Initial variable components gleaned from two extensive pilot studies (Claudet & Ellett, 1990; Claudet, et al., 1991) in a variety of school contexts

also served to inform the model. Importantly, the model presented a means for considering the structure and dynamics of professional supervisory behaviors of administrators and teachers in schools as distinctively organizational in nature, rather than simply isolated, individual phenomena. The O/S model then provided the theoretical basis for the development and refinement of an instrument (the Organizational/Supervisory Climate Inventory - OSCI) designed to measure professional staff and administrator perceptions of the quality of school instructional supervision from an organizational perspective.

Part Two of the study (Model Field Testing) focused on formulating and exploring specific research questions derived from the O/S model. This second part involved two related research phases. Within the quantitative phase of Part Two, initial construct validation and reliability of the OSCI instrument were explored using data collected in 194 schools (14 school districts) in a single state through a variety of large-scale factor analyses and reliability (internal consistency, stability) analyses for subscales. Additionally, the criterion-related validity of the OSCI instrument was examined using multiple school productivity, effectiveness and holding power indices.

Following this quantitative phase, a subsequent qualitative phase of research was also completed in Part Two. This qualitative phase involved using school O/S climate profiles developed from the empirical analyses as reflective frameworks (Schön, 1983) for engaging in meaningful dialogue (using telephone interview techniques) with school-based educators in 20 outlier and comparison schools identified from the original data set. This reflective dialogue focused on identifying additional contextual variables/features characterizing the professional learning environments constructed by educators in individual schools (and districts). This qualitative component of the investigation generated an important set of school-level contextual variables mediating quantitative linkages found to exist among O/S climate dimensions and school effectiveness

indices. Thus, this Part Two qualitative research phase provided additional, useful empirical evidence contributing to a more informed understanding of the multidimensional nature of the professional learning environments impacting teachers and administrators.

Considered collectively, the three research phases reported in the two major parts of the study constitute an empirically derived basis for understanding instructional supervision and professional learning in schools as organizational, rather than individual, phenomena. Importantly, the quantitative and qualitative phases of the study (using multiple units of analysis within each phase) have strong implications for the advisability of employing a multistage/multilevel research design in tandem with organizational model building as an integrated research framework for studying schools as organizations. The study reported in this paper represents initial findings informing a continuing program of research that seeks to synergistically link ongoing, iterative O/S theoretical model development and refinement with school-based empirical work.

The following section discusses details of construction and refinement efforts associated with the development of the Organizational/Supervisory (O/S) Model of Instructional Supervision that constituted the conceptual model guiding the present study.

O/S Model Development

Organizational frameworks presently existing in the literature (Anderson, 1982; Parsons, 1960; Tagiuri, 1968) were reviewed and served as an initial basis for model development efforts. Model development work involved an extensive process of iterative refinements based on selected existing organizational frameworks and results of a series of pilot probes of organizational behavior in a number of case study schools (Claudet & Ellett, 1990; Claudet, et al., 1991). This iterative development and refinement process culminated in the model version presented in this report, and the version used as the basis for survey measure construction.

Organizational/Supervisory (O/S) Model of Instructional Supervision

The model of the organizational structure of school instructional supervision developed and used in this study to guide initial empirical efforts is presented in Appendix B. The model illustrates the multiple, reciprocal relationships existing among the organizational structure of instructional supervision in the school (ecology), the inputs of various school personnel (milieu), and the professional supervisory interactions (social system and culture) represented by the various interrelationships among macro- and micro-level O/S climate variables within the model. These structural and social dimensions, along with multiple interactions and interrelationships among O/S variables, are conceptualized as collectively shaping the professional learning environment distinguishing a school's professional supervisory subculture. The O/S structure and resulting overall O/S climate of a school's supervisory subculture are depicted as being important organizational phenomena mediating school inputs (professional personnel and students) and measures of school outcomes (effectiveness).

Within the model, school O/S structure refers to the particular organizational mix of supervisory activities engaged in by school members on both the micro-communicative and macro-communicative levels. These two levels of supervisory activity allow for a wide range and variety of supervisory encounters, behaviors and practices to occur in any given school context. For example, instructional supervisory activities might typically include a number of individual administrator-teacher supervisory interactions, such as casual conversations and ongoing memos, as well as the often spontaneous informal chats that can be a characteristic and recurring feature of everyday supervisory life in schools. Taken together, these individual supervisory actions and events can be considered as micro-communicative elements nested within larger O/S structures in schools. Among these larger structures, or macro-communicative elements, are professional activities such as

administrator supervising of various departmental and/or grade level faculty curriculum planning and instructional projects, administrative and/or teacher (group) planning of various staff development activities and school inservice workshops, administrators' and teachers' joint participation in supervisory meetings, professional development activities, curricular planning sessions, etc. Considered collectively, these micro- and macro-communicative elements contribute to establishing an overall professional learning environment within a school.

O/S climate in the model is conceptualized as a perceptual phenomenon involving staff members' affective and qualitative perceptions regarding a school's adult supervisory learning environment. It refers to both individual and collective perceptions of the nature and quality of professional supervisory interactions. These perceptions are reflective of the professional norms and supervisory values and expectations infusing school organizational life. The O/S climate construct is further conceptualized as involving six perceptual aspects or dimensions of supervisory interactive behavior. These dimensions address members' perceptions of the relative levels/quality of organizational structure, professional autonomy, collaborative sharing/rapport, district supervisory climate, self reflection, and centralization characterizing professional (i.e.instructional) supervisory interactions.

Additionally, the O/S climate of a school is viewed as being processual - that is, it continually emerges from and is a function of the ongoing supervisory interactions and behaviors of school professional members. This processual aspect refers to the dynamic and fluid nature of school supervisory practices and the multiple interactions among O/S structures, climate dimensions, and person variables. The model depicts member interactions and behaviors as occurring within the organizational context of the O/S structure existing in a school at any given time. The O/S climate found in a given school will be a function of the multiple interrelationships existing among school

personnel (inputs), interactive O/S climate dimensions and the specific kinds of supervisory activities legitimated by and engaged in within the school (O/S structure).

Thus, instructional supervision as broadly defined in the model encompasses the wide variety of professional activities typically occurring in schools. For example, the O/S model suggests that principals, as part of their normal instructional supervisory activities, may engage from time to time in the familiar set of classroom observations of teaching and learning, along with the pre and/or post conferences with teachers that frequently accompany these observations. Depending on the individual school context, the specific "O/S structure" of these observations and conferences will vary. In one school, for instance, teachers may be accustomed to receiving an informal memo from the principal, announcing and/or reminding them of an upcoming classroom visit. In such a school, several informal chats and casual conversations between the principal and individual teachers about "how things have been going" in the classroom may augment or even preempt a more formal pre-observation conference. In other school contexts, professionals possibly operating under different sets of cultural norms and contrasting supervisory values will engage in equally valid but different supervisory behaviors. Thus, underlying cultural norms and values about what constitutes agreed upon supervisory behavior are directly related to school O/S structures. The O/S structures that professionals cultivate and maintain in the school organization, however, are not isolated individual occurrences. The O/S model suggests that the multi-level instructional supervisory activity engaged in by school members constitutes an organizational phenomenon that directly affects the school's supervisory climate and shapes the school's particular professional learning environment.

In viewing the components and elements within the O/S model and their interrelationships, several possibilities arise for explaining professional learning environments in schools. For example, two schools might have essentially the same macro- and micro-communicative elements (O/S

structures) but, because of the manner in which the staff in each of the schools interacts and carries out these structures, the resulting O/S climate in each school could be substantially different. Similarly, the qualities of O/S climates in the two schools could be fairly similar, but could result from substantially different O/S structures.

Thus, the model depicts a school's professional learning environment as arising from complex interactions and interrelationships among an array of variables (structural elements (ecology), persons (milieu), and O/S climate dimensions (social system and culture)) affecting school outcomes. Organizationally, the professional learning environment constructed and sustained by staff members within a school is considered as contributing to the shape and definition of a unique supervisory subculture existing as a subunit within the school's total organizational culture.

Because of the complex nature of the multiple variable interactions posited in the model, the exploratory study described here limited its focus to dimensions of O/S climate and their relationship to three indices of effectiveness (school effectiveness, organizational effectiveness and school holding power). The O/S model is employed in this study as a conceptual guide and as a basis for the generation of research questions.

Independent/Dependent Variables

The organizational/supervisory (O/S) model of instructional supervision developed in this study posits multiple, reciprocal relationships existing among school personnel, supervisory structure and climate, and school outcomes. Supervisory interactions are further operationalized along the six climate dimensions noted above (i.e., organizational structure, professional autonomy, collaborative sharing/rapport, district supervisory climate, self reflection, and centralization). The model provides a conceptual basis for a clearer articulation of the school climate construct as it relates to the supervisory subculture of schools and the formulation of a more useful empirical instrument for

measuring the impact of the supervisory subculture on indices of school effectiveness. The six dimensions of the Organizational/Supervisory Climate Inventory (OSCI) serve as the independent variables in the study. The dependent variables are three recognized indices of effectiveness: (1) school effectiveness (as measured by standardized student achievement test scores); (2) organizational effectiveness (teachers' and administrators' overall perceptions of organizational effectiveness measured by the Index of Organizational Effectiveness (Miskel, Fevurly & Stewart, 1979; Mott, 1972), and (3) school holding power (measured by student attendance).

The study design allows for the investigation of a number of research questions probing the possible multiple relationships among person variables, organizational/supervisory structure, climate dimensions and indices of effectiveness. Research questions guiding the study are presented below. The remainder of the paper reports results, findings and conclusions of an initial investigation of quantitative relationships (quantitative dimension) hypothesized in the O/S model (including, reliability and criterion-related validity of the OSCI instrument developed from the O/S model), as well as initial, highlighted findings of the study's qualitative dimension.

Research Questions

A number of research questions emanating from the O/S conceptual model were addressed in the study. These questions (presented below) served as a framework for structuring the research within the conceptual, quantitative and qualitative phases of the investigation:

1. What empirically derived dimensions can be identified to describe the nature of instructional supervision and professional learning in schools as organizational phenomena?

2. With what degree of reliability can the empirically derived supervisory/professional learning dimensions be measured?

3. What are the relationships (bivariate/multivariate linkages) among the set of empirically derived dimensions of a measure of instructional supervision/professional learning conceptualized as organizational phenomena and a set of school

organizational effectiveness, school productivity and school holding power indices?

4. Are there contextual variables/features that further define the nature and quality of educators' professional learning environments in individual schools and districts?

Methodology

Instrumentation

Two forms of a preliminary version of the Organizational/Supervisory Climate Inventory (OSCI) developed for this study were administered to all professional staff (OSCI-S) and administrative personnel (OSCI-A) in participating schools. This OSCI version included individual survey items addressing several supervisory issues, including perceptions of respondents regarding: (1) the quality of school instructional and supervisory programs (macro O/S element), (2) the quality of administrative and peer supervision of individual work activities (micro O/S element), and (3) the relevance of central office supervisory mandates (i.e., school staff and administrators' perceptions of the quality and usefulness of communications, guidelines and services provided by the central office to their schools) (macro O/S element). The OSCI used for initial data collection consisted of 95 items measured by a four-point Likert scale ranging from 1=Strongly Disagree to 4=Strongly Agree. The 95 items are distributed across the six major climate dimensions derived from the O/S conceptual framework guiding the study. Sample OSCI items include: "Decisions regarding important instructional matters are made jointly by staff and administrators" (Organizational Structure); and "My weekly work schedule includes conferences/discussions with other staff members about their work activities" (Collaborative Sharing/Rapport).

For the criterion-related validity analyses, the factored dimensions of the OSCI served as an independent variable set. Dependent variables were: (1) school effectiveness (standardized student achievement NCE scores); (2) organizational effectiveness, measured by the Index of Perceived Organizational Effectiveness (IPOE) (Miskel, Fevurly & Stewart, 1979; Mott, 1972), and (3) school

holding power (student attendance and teacher absenteeism). The IPOE is designed to measure respondents' perceptions of the overall effectiveness of the school organization in terms of quantity and quality of product, efficiency, adaptability, and flexibility.

Data Source/Data Collection

This study utilized survey data collected during Spring, 1992. Participants in the study included professional staff and administrators in 194 schools (14 districts) in a single state. Initial survey participants included 4,848 professional staff (teachers, counselors, librarians, etc.) and 304 administrators (building principals and assistants). The OSCI/IPOE instrument packets were distributed to each school allowing for a two-week return timeline to facilitate subsequent quantitative data analyses. School achievement, attendance and teacher absenteeism data were collected from school district and State Department of Education files.

A semi-structured interview protocol (Patton, 1990) developed during the study guided subsequent qualitative telephone interviews with two randomly selected teachers and the principal in each of 20 outlier and comparison pair schools identified from quantitative analyses. Qualitative data collected from the 60 total interviews represented over 90 hours of interviewing time spanning a three-month period.

Quantitative Results

Factor Analyses

Usable data were received from a total of 7,358 professional staff (the vast majority were teachers) and 452 school administrators. To probe the initial structure and to empirically examine elements of the construct validity of the OSCI, a series of exploratory principal component, orthogonal and oblique factor analyses were completed. Inspection of the OSCI dataset revealed only a small amount of missing data across respondents (less than 1%). Therefore, item grand means were

substituted for missing item scores for individual respondents to maximize the number of usable cases for the various factor analyses completed. Following this substitution procedure, exploratory factor analyses were conducted, extracting from one to twelve factors using oblique and orthogonal rotation procedures (SAS Institute, 1985).

The results of an initial, one-factor, principal components solution accounted for a total of 31.17% of the total variance in the OSCI-S data, with 60 of the 95 items (63.16%) loading at or exceeding .50. Loadings ranged from .33 to .68 with typical coefficients in the .45 to .60 range. Item loadings for the various factors identified were guided by the following set of decision rules: 1) the minimum value for retaining an item on a factor was .30; 2) an item was retained only if it loaded primarily on one factor; 3) an item was retained on the factor on which its loading was greatest; and 4) if an item loaded on more than one factor, the item was retained only on a factor if the difference between the two highest loadings was .20 or greater.

Based on the simplicity of the factor structure, the conceptual fit of items comprising each factor, and the amount of variance explained by each solution, a six-factor solution was retained for use in subsequent analyses. The six-factor solution was further suggested as the seven-factor solution did not generate an additional clearly identifiable factor. This six-factor, orthogonal solution was thus accepted as best representing the variance in the total data set and the original conceptualization of dimensions of the OSCI. Table 1 (Appendix C) summarizes the results of factor pattern loadings for the one-factor and final six-factor orthogonal solutions.

The six-factor solution accounted for 45.68 percent of the total OSCI-S variance. A total of 58 items with factor structure loadings ranging from .40 to .77 were retained in the revised version of the OSCI-S. This six-factor revised version of the OSCI-S was used in subsequent criterion-related validity analyses. An item location index for the six-factor solution of the OSCI-S showing item

numbers comprising each subscale is provided in Table 2, Appendix C. Item numbers in Table 2 can be cross-referenced to the Item Content Listing of the factored OSCI-S provided as Appendix D.

Reliability

Cronbach Alpha internal consistency reliability coefficients were computed for subscales of the OSCI and IPOE total instrument for professional staff and administrators. Alpha coefficients were computed for total samples and for samples of professional staff within each school as well. In addition, test-retest (stability) coefficients were computed for a separate sample of 60 professional staff over a two- to three-week period. Results of reliability analyses for the OSCI-S and OSCI-A are reported below.

OSCI-S

Reliability coefficients for the OSCI-S subscales generated for the total sample of schools were as follows: Organizational Structure (r=.96), Professional Autonomy (r=.75), Collaborative Sharing/Rapport (r=.81), District Supervisory Climate (r=.85), Self Reflection (r=.81), and Centralization (r=.63). The Cronbach Alpha reliability coefficients for the six subscales for all schools ranged from .63 (Centralization) to .96 (Organizational Structure).

Stability coefficients (test-retest reliability) were computed between two complete OSCI-S instrument sets involving 60 professional staff respondents during Time 1 and Time 2 administrations (the second administration followed approximately two weeks after the first). Pearson product-moment correlations were computed between scores for each OSCI subscale from the first administration and the second administration. The stability coefficients for the OSCI-S subscales were as follows: Organizational Structure (r=.95); Professional Autonomy (r=.87); Collaborative Sharing/Rapport (r=.97); District Supervisory Climate (r=.88); Self Reflection (r=.88); and Centralization (r=.75). All of these reliability coefficients were statistically significant (p<.0001) and

positive in direction.

OSCI-A

For the total sample of administrator respondents, Cronbach Alpha reliability coefficients were computed for each of the OSCI-A subscales. In schools where more than one administrator responded to the OSCI-A, school means were used as the units of analysis. Alpha coefficients for the OSCI-A subscales were as follows: OS (r=.94), PA (r=.72), CSR (r=.74), DSC (r=.87), SR (r=.79), and CEN (r=.69).

Criterion-Related Validity

To further explore the construct validity of the OSCI-S, a series of criterion-related validity analyses were completed. For these analyses, the factored dimensions of the OSCI served as an independent variable set. Dependent variables were: (1) school effectiveness (standardized student achievement mean normal curve equivalent (MNCE) scores); (2) organizational effectiveness, measured by the Index of Perceived Organizational Effectiveness (IPOE) (Miskel, Fevurly and Stewart, 1979; Mott, 1972), and (3) school holding power (student attendance).

The criterion-related validity analyses were designed to examine bivariate and multivariate relationships among the six, factorially independent OSCI subscales and the measures of school productivity-effectiveness (standardized achievement), school organizational effectiveness (IPOE) and school holding power (student attendance). Multivariate analyses included a series of stepwise multiple regression analyses for each criterion variable and the six OSCI subscales, and canonical correlation analyses for the set of effectiveness variables and the set of six OSCI variables.

Bivariate Analyses

Pearson product-moment correlation coefficients were computed between subscales of the six-factor solution of the OSCI-S, scores on the IPOE-S, standardized student achievement scores, and

average daily attendance (ADA) for the total sample of schools and by school level (elementary, middle/junior high, and secondary). Correlations obtained between the OSCI and IPOE ranged from .82 (OS/IPOE, secondary schools) to -.06 (DSC/IPOE, middle/junior high schools). Overall, the OS/IPOE and PA/IPOE correlations showed greater significance than the other OSCI/IPOE relationships. Correlations between OSCI-S subscale scores and mean normal curve equivalent (MNCE) standardized achievement test scores for all schools yielded statistically significant but rather moderate relationships for the OSCI-S subscales of Organizational Structure ($r=.20$, $p<.05$) and Professional Autonomy ($r=.29$, $p<.004$). Additionally, the correlation between student achievement for elementary schools and the OSCI-S subscale of Professional Autonomy was also positive, statistically significant and moderate in magnitude ($r=.35$, $p<.005$).

Intercorrelations between the OSCI-S subscales and average daily attendance (ADA) for all schools and by school level were also computed. Only 4 of 24 correlations were statistically significant ($p<.05$). For the total school sample, Self Reflection (SR) was positively, though rather moderately, associated with ADA ($r=.19$, $p<.05$). For the elementary school sample, only one significant correlation was found between the Collaborative Sharing/Rapport (CSR) OSCI-S subscale and ADA ($r=.22$, $p<.05$). This same subscale, however, was rather strongly but negatively correlated with ADA for the sample of middle/junior high schools ($r=-.60$, $p<.01$). For this school level, a moderately strong, negative correlation was also found between Organizational Structure (OS) and ADA ($r=-.48$, $p<.05$).

A series of partial correlation coefficients were also computed between subscales of the OSCI-S and the IPOE-S controlling for socioeconomic status (SES) using the total sample of schools. Statistically controlling for the effects of SES did little to alter the primary relationship between the OSCI-S and the IPOE-S variables. A similar partial correlation analysis was completed for the

relationships between the OSCI-S subscales and the school effectiveness indices of achievement and ADA. Statistically controlling for SES with the partial correlation procedure again did little to alter the primary relationships (Pearson correlations) between the OSCI-S subscales and these effectiveness variables.

Multivariate Analyses

Multiple Regressions

Multivariate relationships among the set of O/S climate dimensions (independent variables) and the various school effectiveness measures were also explored. A series of stepwise multiple regression analyses with forward inclusion of variables (SAS Institute, 1985) were completed for each school effectiveness measure (dependent variables) by regressing each school effectiveness variable on each dimension/subscale of the OSCI-S. A total of three regression analyses were computed, one for each dependent variable. School means were used as the units of analysis in all regression procedures.

A first multiple regression analysis was completed for the independent variable set (OSCI dimensions) using the IPOE as the dependent variable. The first variable to enter the regression equation (highest single correlate with the dependent variable) was the OSCI-S subscale/dimension Organizational Structure (OS). This OSCI-S dimension accounted for 53.30 percent of the total variation among schools in perceived organizational effectiveness. The second variable to enter the regression equation was the OSCI-S subscale/dimension Collaborative Sharing/Rapport (CSR). In combination, these two variables accounted for 57.80 percent of the total variance among schools in perceived organizational effectiveness. The third variable to enter the regression equation was the OSCI-S subscale/dimension District Supervisory Climate (DSC). Collectively, these three variables accounted for 59.30 percent of the total variance among schools in perceived organizational

effectiveness (R=.77). These results indicate that, of the six OSCI-S subscales/dimensions, Organizational Structure (OS), Collaborative Sharing/Rapport (CSR) and District Supervisory Climate (DSC) were the three most important variables explaining/accounting for variation in perceived organizational effectiveness across all schools. Additionally, the results indicate that the OSCI-S subscale Organizational Structure (OS) accounted for most of the total variance among schools in perceived organizational effectiveness.

The second regression analysis completed for the set of independent variables (OSCI dimensions) used student achievement mean normal curve equivalent (NCE) scores for the California Achievement Test as the dependent variable for the total school sample. The first variable to enter the regression equation was the OSCI-S subscale/dimension Professional Autonomy (PA). This OSCI-S dimension accounted for 8.20 percent of the total variation among schools in student achievement. The second variable to enter the regression equation was the OSCI-S subscale/dimension Collaborative Sharing/Rapport (CSR). In combination, these two variables accounted for 13.10 percent of the total variance among schools in student achievement. These results indicate that Professional Autonomy (PA) and Collaborative Sharing/Rapport (CSR) were the two most important OSCI-S variables accounting for variation in student achievement across all schools (R=.36).

A third multiple regression analysis was completed for the independent variable set (OSCI dimensions) using ADA as the dependent variable. The first variable to enter the regression equation was the OSCI-S subscale/dimension Self Reflection (SR). This OSCI-S variable accounted for 3.60 percent of the total variation in ADA. The second OSCI-S subscale/dimension to enter the equation was Collaborative Sharing/Rapport (CSR). Collectively, these two variables accounted for 7.10 percent of the total variation among schools in ADA (R=.27). The results of this regression analysis

indicate that the dependent variable of school average daily attendance (ADA) shared more common variance with professional staff perceptions of Self Reflection and Collaborative Sharing/Rapport than with the other OSCI-S dimensions of Organizational Structure (OS), Professional Autonomy (PA), District Supervisory Climate (DSC), and Centralization (CEN).

Canonical Correlation

A canonical correlation analysis (SAS Institute, 1985) was also completed to examine possible multivariate relationships between the independent and dependent variable sets. The independent variable set consisted of the six OSCI-S subscales: Organizational Structure, Professional Autonomy, Collaborative Sharing/Rapport, District Supervisory Climate, Self Reflection, and Centralization. The dependent variable set consisted of the three school effectiveness measures: student achievement, student attendance and perceived school organizational effectiveness.

The results of this analysis yielded one significant multivariate relationship between the two sets of variables (r_c = .795, p<.0001). The canonical variate for the OSCI-S subscales was found to be most importantly defined by the subscales of Organizational Structure (r=.919) and Professional Autonomy (r=.740). Similarly, the IPOE was found to be the main contributor to the canonical variate of the school effectiveness variable set (r=.990). Additionally, Pearson correlations of each variable with the canonical variable of the opposite variable set demonstrated that the canonical correlation between the variable sets (R_c=.795, p<.0001) was primarily accounted for by the contributions of the OS and PA subscales of the OSCI-S (r=.731, r=.588) and the IPOE (r=.787).

Collectively, criterion-related validity analysis results (viz., strong O/S/IPOE, but rather weak O/S/NCE and attendance relationships) empirically demonstrated that school organizational/ supervisory phenomena are best understood in terms of their relationship to the school's organizational effectiveness, rather than to more traditional effectiveness indices (i.e., student

achievement and holding power). These results (using school means as the unit of analysis) showed the strongest bivariate "linkages" between the OS, CS/R and DSC subscales and the IPOE (R=.77), and a strong multivariate relationship (canonical correlation) between the two independent/dependent variable sets (R_c=.795, p<.0001), primarily accounted for by contributions of the OS and PA subscales (r=.731, r=.588) and the IPOE (r=.787). Collectively, results of these analyses provided general support for the construct validity (Messick, 1988) of the O/S model and factor analyzed OSCI measure.

Subsequently, and importantly, a series of bivariate correlations between the OSCI Organizational Structure (OS) subscale and the IPOE were computed within each of 130 schools using individual teachers as the unit of analysis. Intriguingly, the within school correlations ranged in magnitude and direction from .88 to -.94. These correlations provided a quantitative data matrix from which O/S climate outlier (elementary, middle, and secondary) and comparison pair (low, middle, and high SES) schools were selected to guide the qualitative component of the study. These O/S climate outlier and comparison pair schools were selected giving consideration to matches between SES and standardized NCE scores - variables of considerable note in the extant school effects and recent school effectiveness literatures (e.g., Teddlie & Stringfield, 1993). Most interestingly, comparison pair schools within each SES category, while selected on the basis of marked similarities in effectiveness, displayed substantial differences in OS/IPOE quantitative relationships. The following section provides further details of this qualitative dimension of the exploratory analyses.

Qualitative Results

Inductive analyses completed for outlier and comparison pair schools resulted in the generation of a final set of theory-based assertions (Erickson, 1986) about the nature of educator

perceptual variation in these identified O/S climate schools in terms of both the quality of school organizational/supervisory (O/S) climate and organizational effectiveness and the perceived relationship between these variables. These empirically derived propositional statements, in turn, were found to reflect a number of school-level contextual variables differentiating educators' supervisory perceptions within individual schools. Five contextual variables further mediating administrator and staff perceptions of O/S climate quality and organizational effectiveness at the school level were identified (viz., Principal Supervisory Leadership Style, Decisionmaking Structure, Organizational/Supervisory Focus, Supervisory Stance, and District-School Supervisory Relationship). The context variables emerging in this qualitative work focus on the kind of supervisory leader style of principals (passive OR active), the type and quality of supervisory decisionmaking structure (organizationally weak, loosely defined OR strong, collegial), the nature of the O/S focus of personnel (school- OR classroom-oriented), the supervisory stance assumed by these personnel (proactive OR reactive), and the nature and quality of existing district-school supervisory relationships (strong, contextually focused OR weak, unfocused).

The combined set of theory-based assertions and contextual variables generated through the inductive analysis process represented an important, additional analysis stage that contributed greatly to model refinement and facilitated a more comprehensive and deeper understanding of the nature of variable linkages between O/S climate and organizational effectiveness in individual schools.

Findings and Conclusions

Exploratory factor analyses of the OSCI-S data set completed in this study resulted in six identified factors or OSCI dimensions: Organizational Structure (OS), Professional Autonomy (PA), Collaborative Sharing/Rapport (CSR), District Supervisory Climate (DSC), Self Reflection (SR), and Centralization (CEN). Results of these analyses supported the construct validity of the OSCI as an

inventory of these six dimensions of organizational/supervisory (O/S) climate. This factor analyzed, six-dimensional OSCI-S subscale structure was subsequently incorporated into the refined O/S model configuration (the version shown as Appendix B).

Results of factor analyses yielded five major findings: (1) the exploratory factor analyses of the OSCI suggested that the OSCI instrument is a multidimensional inventory of school organizational climate; (2) the first OSCI subscale/dimension of Organizational Structure (OS) demonstrated the largest number of item loadings; (3) the six-factor solution generated factors that were only partly consistent with the original O/S model dimensions; (4) the macro- and micro-communicative structural dimensions posited in the O/S model were not confirmed in the factor analyses; and (5) a relatively strong District Supervisory Climate (DSC) factor was retained in the six-factor solution that was not posited in the original set of seven O/S climate dimensions.

These findings of the OSCI exploratory factor analyses support a number of conclusions. A first conclusion is that it is possible to measure with a paper and pencil test meaningful dimensions of organizational/supervisory (O/S) climate. Secondly, from the number and content of item loadings in the analyses, it can be concluded that the first strong OSCI subscale/dimension of Organizational Structure (OS) was able to contribute the most to a clear articulation and explanation of the overall organizational/supervisory (O/S) construct. Given the fact that the six-factor solution generated factors that were only partly consistent with original O/S model dimensions, a third conclusion is that there is a need for further development and possible expansion of the OSCI instrument, or perhaps the use of the OSCI in future studies in combination with other measures. A fourth conclusion is that it might prove useful, in view of factor analytic findings, to reexamine the O/S model in general and the relationships among the six subscales/dimensions retained in the factor analyses procedures.

Interestingly, the six-factor solution did not conceptually support the "nesting" of micro-

communicative supervisory elements within larger macro-communicative elements posited in the original O/S model. Thus, a review of this structural model component seems warranted, since respondents did not differentiate between micro- and macro-supervisory structures in their school supervisory learning environments. Additionally, as the District Supervisory Climate (DSC) dimension emerged as a rather strong OSCI subscale (and, a strong contextual variable), it may be that the notion of "structural nesting" is applicable to a broader organizational conception - that is, as a larger inter-organizational structure, such as the "school-district" professional learning environment.

Investigations conducted to examine both the internal consistency (Cronbach Alpha) and stability (test-retest) of the OSCI instrument yielded findings supporting the OSCI-S instrument as a highly reliable and stable measure of organizational/supervisory climate. Results of internal consistency analyses completed for the OSCI-S instrument yielded findings that: (1) five OSCI-S subscales (OS, PA, CSR, DSC, and SR) obtained strong reliability coefficients, ranging from .75 to .96, and (2) the OSCI-S subscale of Centralization (CEN) obtained a moderately strong reliability coefficient (r=.63). These internal consistency findings support the conclusion that the items comprising the various OSCI-S subscales are homogeneous and can be considered reasonable samples of the subscales they represent.

Results of stability (test-retest reliability) analyses conducted on the OSCI-S instrument yielded findings that the first five OSCI-S subscales demonstrated strong stability with coefficients ranging from .87 to .95, and that a more moderate stability coefficient was obtained for the Centralization (CEN) subscale (r=.75). These findings suggest the conclusion that five of the six OSCI-S subscales (i.e., OS, PA, CSR, DSC, and SR) demonstrated strong stability over a two-to-three week period, while the Centralization subscale demonstrated more moderate stability.

Exploration of the criterion-related validity of the various dimensions of the OSCI-S constituted another important aspect of OSCI instrument development work. The criterion-related validity of OSCI-S dimensions was investigated through examining relationships of independent and dependent variables using school means as the units of analysis. Results of correlation analyses completed to investigate bivariate relationships between the various O/S climate dimensions and the various school effectiveness indices produced five major findings. First, considering all the school effectiveness indices, the pattern of correlations for the OSCI and IPOE were stronger and more frequently occurring than for the OSCI and other effectiveness variables (i.e., student achievement (CAT) and school holding power (ADA)). This general relationship held by school levels as well. Secondly, the first three OSCI subscales/dimensions of Organizational Structure (OS), Professional Autonomy (PA) and Collaborative Sharing/Rapport (CSR) demonstrated the strongest and most consistent relationships with the IPOE effectiveness variable across the various school levels. Stated another way, these three subscales/dimensions demonstrated the greatest validity when the IPOE was used as a criterion variable.

A third finding is that, with the exception of the Professional Autonomy (PA) subscale/dimension, little relationship was found between the OSCI and student achievement. A fourth finding is that the relationship between the OSCI-S and the school holding power index used (ADA) appears to be different for middle/junior high schools than for elementary and secondary schools in both magnitude and direction. A final, fifth finding is that relationships between O/S climate variables and school effectiveness indices are independent of school socioeconomic status.

Several conclusions are derived from these findings. First, it can be concluded that the O/S climate construct, as an organizational variable, appears to relate most strongly to process variables such as overall organizational effectiveness, rather than to other school effectiveness variables such

as student achievement and holding power (viewed as product variables). A second conclusion is that apparently there are context variables that serve to mediate the relationship between organizational/ supervisory climate and indices of school effectiveness/productivity. A third conclusion is that school socioeconomic status (SES) is not a viable school context variable mediating linkages between O/S relationships and school effectiveness/productivity.

Regarding multivariate analyses results, five major findings were derived from results of the set of stepwise regression and canonical correlation analyses conducted. First, a rather large portion of the variance in organizational effectiveness of schools (as measured by the IPOE) was accounted for by a combination of selected subscales of the OSCI-S. Of the three OSCI-S variables emerging in the regression analyses -- Organizational Structure (OS), Collaborative Sharing/Rapport (CSR) and District Supervisory Climate (DSC) -- Organizational Structure (OS) was found to be the most important O/S climate variable in terms of explaining/accounting for variation in perceived organizational effectiveness across all schools.

A second finding is that only moderate multivariate relationships were found to exist between OSCI-S variables and the school productivity variable (CAT) and the school holding power variable (ADA). A third somewhat related finding is that different OSCI variables were found to explain different amounts of variance in different school effectiveness indices. A fourth finding is that the OSCI subscales/dimensions, from a psychometric perspective, do have incremental, criterion-related validity with all three of the effectiveness indices (IPOE, CAT and ADA variables). However, the strongest explanatory relationship involved the IPOE variable, and to a much lesser extent the student achievement and student average daily attendance variables. A fifth finding is that there is a strong multivariate relationship between the set of climate variables and the set of effectiveness variables, and tha this relationship is primarily explained by the contributions of the OSCI dimensions/subscales

of Organizational Structure (OS), Professional Autonomy (PA) and the dependent variable of overall organizational effectiveness (IPOE).

The above findings suggest several conclusions. First, the O/S climate construct can be best understood as a mediating variable that is conceptually linked to a greater extent to the overall effectiveness of the school as an organization than to what the school produces in terms of educational outcomes (e.g., school achievement). Secondly, the construct of school effectiveness does not have any simple relationship with school organizational/supervisory (O/S) climate, and different definitions of school effectiveness (i.e., organizational effectiveness, achievement and holding power) may be best understood in terms of their differential linkages to specific climate variables or dimensions of school climate. Thirdly, organizational elements of school effectiveness rather than other elements of school effectiveness (e.g., school achievement or school holding power) are most strongly linked to elements of school O/S climate. A fourth and final conclusion is that variation in schools in their organizational effectiveness is primarily explained by Organizational Structure (OS) and Professional Autonomy (PA) rather than other dimensions of O/S climate.

Finally, overall results of criterion-related validity analyses collectively provide additional support for the construct validity (Messick, 1988) of the O/S model and the factor analyzed OSCI measure. By way of summary, collective results of criterion-related validity analyses supported the following overall findings: (1) strong positive to moderate relationships exist between the Organizational Structure (OS), Professional Autonomy (PA) and Collaborative Sharing/Rapport (CSR) OSCI-S subscales and the dependent variable of organizational effectiveness (IPOE); (2) considering all of the criterion-related validity coefficients generated, the greatest support for the validity of the OSCI instrument was evidenced by the Organizational Structure (OS) and Professional Autonomy (PA) subscales.

Based on these collective findings of criterion-related validity analyses, several conclusions are derived. First, the measurement of staff perceptions is a valid means of examining the overall organizational/supervisory climate in schools. Secondly, understanding the validity of staff perceptions of organizational/supervisory O/S climate depends upon the particular conceptualization of effectiveness used. A final conclusion is that the criterion validity evidence, when combined with other validity evidence (e.g., results of factor analyses and content validation), support the overall construct validity of the OSCI-S. Thus, the OSCI instrument was found to be a reasonably valid and reliable measure of school organizational/supervisory climate.

Major findings and conclusions of Part Two (quantitative and qualitative phases) provided additional support for the viability of conceptualizing school instructional supervision as a multidimensional, organizational phenomenon. Collectively, the study's findings supported the O/S climate construct as a multidimensional variable that is most directly tied to educators' perceptions of the school as an organization (IPOE). The strongest findings and conclusions derived from the quantitative analyses completed suggested that the O/S climate construct may be best understood as an organizational variable that is most directly explained by educators' perceptions of the O/S climate dimensions of Organizational Structure (OS) and Professional Autonomy (PA). Furthermore, the findings and conclusions of qualitative analyses completed provided additional within-school evidence supporting the multidimensional nature of the O/S climate construct. Three of the five contextual variables emerging in the inductive analyses (viz., Principal Supervisory Leadership Style, Organizational/ Supervisory Focus, and Supervisory Stance) were found to be additional, distinct context variables affecting educators' perceptions of O/S climate quality at the school level. Thus, through identifying a series of school-level contextual variables found to further mediate educators' perceptions of school O/S climate quality, results of qualitative probes completed provided further

evidence supporting the complex, multidimensional nature of the O/S climate construct as a school organizational variable.

Interpretation

Results of quantitative and qualitative analyses completed in this study provided general support for the multidimensionality of the O/S climate construct and its relationship to indices of school effectiveness. The finding that the OSCI-S subscales/dimensions do possess some incremental, criterion-related validity with the school effectiveness indices also suggested that the general notion of school effectiveness and its connection to school climate cannot be explained unidimensionally.

Further, the O/S climate of schools appears to be best understood as a school organizational culture and professional learning environment construct that is primarily linked to the effectiveness of the school as an organization - not to what the school generates in terms of an organizational product (i.e., student achievement scores). This conclusion provides some support for the O/S model that suggests that O/S climate is first linked to the overall effectiveness of the school as an organization -- an organization that is comprised, in part, of a perceptible supervisory subculture with its own unique organizational/supervisory structure. Relationships between O/S climate and student achievement and attendance are probably mediated by more direct perceptions and subsequent behaviors of school members regarding the school's organizational effectiveness. Additionally, linkages between O/S climate and organizational effectiveness appear to be further mediated by important school context variables such as those identified in the study's qualitative component (i.e., principal supervisory leadership style, decisionmaking structure, etc.) (Appendix E). These contextual variables represent important study findings further informing the O/S model - that is, school-level variables generated as a direct result of employing an integrated theory-building/multiple methodology design. Interestingly, the kind and depth of scl ool-level context variables emerging in this study

extend considerably beyond notions of school context advanced in recent "new generation" school effectiveness writings (e.g., Wimpelberg, et al., 1989).

The O/S conceptual framework developed in this study is conceptually important because it shifts the focus to viewing instructional supervision and professional learning in schools as organizational, rather than individual, phenomena. Additionally, the development/testing of the OSCI instrument is important as it: (1) provides a new, multidimensional inventory of the nature of school O/S climate, and none currently exists; (2) represents a useful empirical means for clarifying relationships between the supervisory climate of schools and multiple indices of school effectiveness, (3) constitutes a practically administered measure that can be used in future research to further test model relationships, and (4) provides an important reflective analysis tool for stimulating data-based dialogue among teachers and administrators on ways to improve educational practice through understanding supervisory (a.k.a. "administrative") leadership and supervisory practice in schools as complex, multidimensional constructs.

This study provides exploratory evidence suggesting that professional supervision in schools can be conceptualized multidimensionally - i.e., differently than portrayed in the traditional instructional supervision and school learning environment literatures. But, further and importantly, findings of this study strongly suggest the viability of reframing (Schön, 1979, 1991) supervisory leadership practice and professional learning in schools as organizational phenomena - that is, of viewing supervisory practice through an organizational lens. Collectively, findings from the quantitative and qualitative dimensions of the present study - and the construct validity evidence gathered in support of the O/S model thus far - suggest the usefulness of subscribing to a richer view of school instructional supervision as fundamentally organizational in nature - a view that perhaps more fully captures the complexity and multidimensional nature of administrative practice and adult

supervisory leading and learning in schools.

Finally, the interrelated phases of research activity reported in this study have important implications for deepening our understandings of the ways in which educators' supervisory behavior in schools is related to important organizational climate dimensions, and how these dimensions interact to impact school effectiveness. The refined organizational/supervisory (O/S) theoretical model developed in this study is viewed as a potentially useful organizational framework for conceptualizing about the nature of the professional learning environment educators collaboratively construct in individual schools, and how this unique learning environment can constitute an important component (or subculture) of the organizational culture of schools.

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APPENDIX A:

Multistage/Multilevel Theory Building Inquiry Process

MULTISTAGE/MULTILEVEL THEORY-BUILDING
(TWO-STAGE/TWO-LEVEL METHODOLOGY)

STAGE ONE - **Quantitative Inquiry (normative level analyses)**

Level One: schools used as the units of analysis (school means - variation among schools)

Level Two*: individuals within schools used as the analytic units (individual scores - variation within schools) (variation in independent/ dependent variable relationships from one school to the next)

* multiple methodology "bridge" used to select outlier and comparison pair schools

STAGE TWO - **Qualitative Inquiry (cultural level analyses)**

Level One: individual school probes; construction of school O/S climate profiles

Level Two: inductive assertion process; identification of context variables

Figure 1: Multistage/multilevel inquiry process depicting the complementarity between quantitative and qualitative stages (each employing multiple unit of analysis levels) within an integrated theory-building/research methodology design

APPENDIX B:

Organizational Supervisory (O/S) Model of Instructional Supervision

O/S Model of Instructional Supervision

School Supervisory Subculture

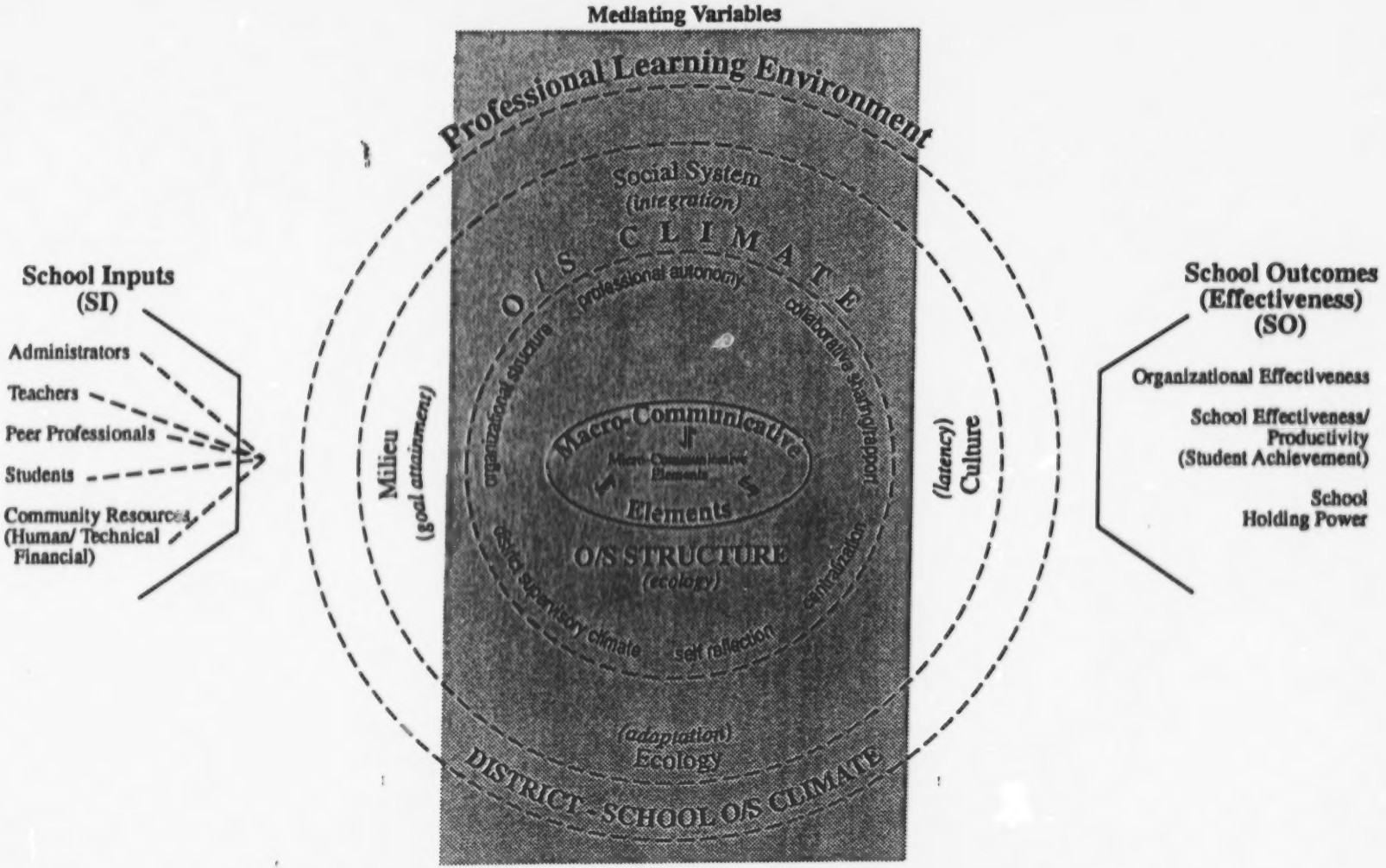

Figure 2: Organizational/Supervisory (O/S) model of the organizational structure and dynamics of instructional supervisory practices within the school supervisory subculture

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APPENDIX C:

Factor Analytic Tables

Table 1

Summary of Factor Pattern Loadings[a] for the OSCI-S One-Factor and Six-Factor Solutions (n=2974)

OSCI-S Item	1-Factor Solution	6-Factor Solution					
		I	II	III	IV	V	VI
1	.47						
2	.66	.59					
3	.57						
4	.64	.63					
5	.43				.51		
6	.47						
7	.63	.59					
8	.48				.67		
9	.46				.67		
10	.65	.62					
11	.69	.64					
12	.64	.58					
13	.65	.65					
14	.71	.67					
15	.55	.56					
16						.70	
17	.62	.62					
18	.71	.71					
19	.72	.66					
20	.70	.64					
21	.50				.60		
22	.70	.61					
23	.65						
24	.52						

(table continues)

Table 1 (continued)

OSCI-S Item	1-Factor Solution	6-Factor Solution I	II	III	IV	V	VI
25	.56	.51					
26	.69	.65					
27							.53
28	.72	.63					
29	.65	.56					
30	.73	.66					
31	.72	.67					
32	.53						
33	.73	.64					
34	.56				.59		
35	.52				.62		
36	.48						
37	.72	.59					
38	.75	.65					
39	.74	.64					
40							.56
41	.52	.47					
42	.37			.46			
43						.77	
44	.67						
45	.72	.58					
46	.59						
47	.69						
48	.66						
49	.50						

(table continues)

Table 1 (continued)

OSCI-S Item	1-Factor Solution	6-Factor Solution I	II	III	IV	V	VI
50	.46						
51	.45		.43				
52	.43						
53	.60						
54	.49						
55	.60						
56	.32						
57	.40						
58	.46						
59	.48		.45				
60	.49			.53			
61	.65						
62	.40			.72			
63	.63						
64	.69						
65	.30					.66	
66	.67						
67	.41			.41			
68			.40				
69	.68						
70	.66						
71	.47		.49				
72	.59		.56				
73							.62
74	.57						

(table continues)

Table 1 (continued)

OSCI-S Item	1-Factor Solution	6-Factor Solution I	II	III	IV	V	VI
75	.56		.51				
76	.70						
77	.50		.54				
78						.76	
79	.43			.61			
80	.60			.52			
81	.64						
82	.52						
83	.65			.53			
84	.47		.59				
85	.30						
86	.31						
87	.61						
88							.61
89	.62						
90							
91	.65						
92	.49				.66		
93	.53		.45				
94	.54						
95	.41			.69			
Variance Explained		16.99	9.64	7.21	5.81	3.23	2.80
Total Variance Explained	31.17				45.68		

* factor structure coefficients in this table are Pearson coefficients

Table 2

Item Location Index for the Six-Factor Solution of the OSCI-S

	Factor	Items							
1)	Organizational Structure (26)*	2, 15, 28, 41,	4, 17, 29, 45	7, 18, 30,	10, 19, 31,	11, 20, 33,	12, 22, 37,	13, 25, 38,	14, 26, 39,
2)	Professional Autonomy (9)	51, 93	59,	68,	71,	72,	75,	77,	84,
3)	Collaborative Sharing/Rapport (8)	42,	60,	62,	67,	79,	80,	83,	95
4)	District Supervisory Climate (7)	5,	8,	9,	21,	34,	35,	92	
5)	Self Reflection (4)	16,	43,	65,	78				
6)	Centralization (4)	27,	40,	73,	88				

* Number of items per factor

APPENDIX D:

Item Content Listing of Factored OSCI-S

FACTOR 1 -- ORGANIZATIONAL STRUCTURE (OS):

2 - staff members respect ideas and perspectives of the administrator(s) about instruction
4 - open discussion of important instructional problems/issues is encouraged during staff meetings
7 - the administrator(s) respect(s) ideas and perspectives of staff members about instruction
10 - staff members and administrator(s) display a sense of professional trust toward each other
11 - instructional meetings make staff members assess the current quality of instruction
12 - I feel comfortable in providing suggestions to the administrator(s) about improving instruction
13 - staff members are expected to participate fully in instructional meetings
14 - instructional meetings include discussion of school instructional goals
15 - instructional meetings are scheduled so that all involved can attend
17 - instructional meetings are scheduled at times indicating that they are important professional activities
18 - administrator(s) and staff together produce plans for action during instructional meetings
19 - decisions regarding important instructional matters are made jointly by both staff and administrator(s)
20 - staff members are heavily involved in planning and coordinating various instructional meetings
22 - activities in instructional meetings are of high quality
25 - staff members often serve as presenters during staff inservices
26 - instructional meetings address current school instructional needs
28 - staff and administrator(s) work cooperatively to design/develop instructional programs
29 - the administrator(s) often participate(s) in small group instructional meetings with staff
30 - administrator(s) and staff clearly communicate to each other the kind of school they want
31 - instructional meetings are carried out in a collaborative, professional manner
33 - staff members and administrator(s) regularly exchange ideas concerning instructional matters
37 - the administrator(s) openly share(s) ideas about improving instruction with me
38 - the administrator(s) solicit(s) staff input concerning instructional goals
39 - administrator(s) and staff focus on instructional problem-solving during meetings
41 - staff members are expected to attend regular instructional meetings
45 - staff members and administrator(s) agree on instructional needs

FACTOR 2 -- PROFESSIONAL AUTONOMY (PA):

51 - I am allowed to use my own self-evaluations as a basis for my professional development
59 - I am allowed to choose the kinds of professional development activities in which I participate
68 - I have the freedom to choose how I use my planning time
71 - I am allowed to be creative and innovative in the submission of lesson plans
72 - I am encouraged by the administrator(s) to assess my own classroom teaching/professional activities
75 - my ideas and suggestions about improving instruction are respected by other professionals
77 - I can freely discuss my own instructional concerns/problems with other staff members
84 - I can request that my administrator(s) visit my class
93 - I have confidence in suggestions made by other staff about improving my work performance

FACTOR 3 -- COLLABORATIVE SHARING/RAPPORT (CSR):

42 - one or more staff members (as opposed to the administrator(s)) determine the nature of instructional supervisory activities
60 - my weekly work schedule includes conferences/discussions with other staff members about their work activities
62 - my weekly schedule includes observations of the classroom/professional activities of other staff members
67 - if money is available for staff participation in professional activities outside of school (e.g., conferences, workshops, etc.), I can spend it in the way I choose
79 - it is expected that other staff members will informally visit my classroom
80 - the administrator(s) provide me with regular feedback about the quality of my lesson plans
83 - I regularly discuss with my administrator(s) my role in accomplishing school instructional goals
95 - I regularly engage in observations and assessments of other staff members' classroom teaching/professional activities

FACTOR 4 -- DISTRICT SUPERVISORY CLIMATE (DSC):

5 - the district office solicits building administrator input concerning school instructional goals
8 - policies set by the district office are helpful to staff in accomplishing school instructional goals
9 - instructional guidelines from the district office are in agreement with staff perceptions of school needs
21 - the district office solicits building staff input concerning school instructional goals
34 - inservices mandated by the district office are consistent with instructional goals valued by staff
35 - instructional priorities and goals set by the district central office are clear to staff
92 - I agree with district office instructional goals and/or priorities

FACTOR 5 -- SELF REFLECTION (SR):

16 - I spend a lot of time during the regular school day thinking about ways to improve instruction
43 - I spend a lot of time outside of school thinking about ways to improve instruction
65 - I spend a lot of time during the regular school day thinking about ways to improve my own instructional activities
78 - I spend a lot of time outside of school thinking about ways to improve my own instructional activities

FACTOR 6 -- CENTRALIZATION (CEN):

27 - the administrator(s) (as opposed to staff) determine(s) the kinds of instructional supervisory activities that involve staff
40 - the administrator(s) (as opposed to staff) determine(s) the extent to which staff must be involved in instructional supervisory activities

73 - the administrator(s) (as opposed to me) determine(s) the extent to which I must be involved in individual professional supervisory activities

88 - the administrator(s) (as opposed to me) determine(s) my individual professional supervisory activities

APPENDIX E:

Contextual Variables Further Mediating
O/S Climate and Organizational Effectiveness

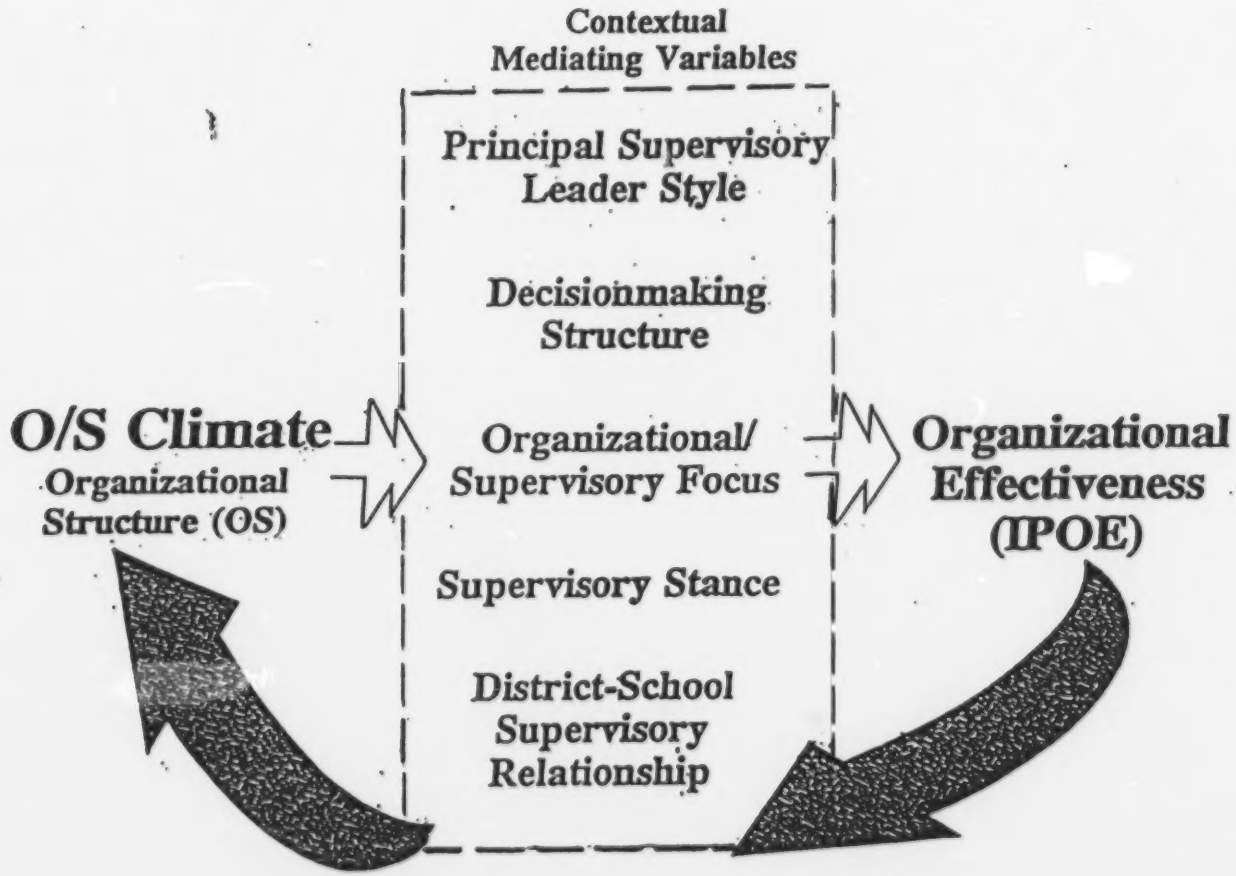

Figure 3: Within-school contextual variables further mediating the relationship between Organizational Structure (OS) and Organizational Effectiveness (IPOE)